Supplementary Online Content

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This supplementary material has been provided by the authors to give readers additional information about their work.

eTable 1. List of clinical trials

Trial Name	Phase	Treatment Arm	Time Point	N	PASI 50 (%)	PASI 75 (%)	PASI 90 (%)	PASI 100 (%)
Clinical trials included in the short-term NMA								
Asahina	2/3	Placebo	16	46	19.6	4.4	0	
Asahina	2/3	Adalimumab 80 mg at week 0, then 40 mg EOW starting at week 1	16	43	81.4	62.8	39.5	
Bissonnette	4	Placebo	16	10		20		
Bissonnette	4	Adalimumab 80 mg at week 0, then 40 mg EOW starting at week 1	16	20		70		
REVEAL	3	Placebo	16	398		6.5		
REVEAL	3	Adalimumab 80 mg at week 0, then 40 mg EOW starting at week 1	16	814		71		
CHAMPION	3	Placebo	16	53	30.2	18.9	11.3	1.9
CHAMPION	3	Methotrexate (low dose)	16	110	51.8	35.5	13.6	7.3
CHAMPION	3	Adalimumab 80 mg at week 0, then 40 mg EOW starting at week 1	16	108	88	79.6	51.9	16.7
Gordon 2006	2	Placebo	12	52		3.9		0

Trial Name	Phase	Treatment Arm	Time Point	N	PASI 50 (%)	PASI 75 (%)	PASI 90 (%)	PASI 100 (%)
Gordon 2006	2	Adalimumab 80 mg at week 0, then 40 mg EOW starting at week 1	12	45		53.3		11.1
Cai 2017	3	Placebo	12	87		11.5	3.4	1.1
Cai 2017	3	Adalimumab 80 mg at week 0, then 40 mg EOW starting at week 1	12	338		77.8	55.6	13.3
Goldminz 2015	4	Methotrexate (low dose)	16	15		26.7		
Goldminz 2015	4	Adalimumab 80 mg at week 0, then 40 mg EOW starting at week 1	16	15		66.7		
Leonardi	3	Placebo	12	166	14.5	3.6	0.6	
Leonardi	3	Etanercept 25 mg BIW / 50 mg QW	12	162	58	34	11.7	
Papp	3	Placebo	12	193	9.3	3.1	0.5	
Papp	3	Etanercept 25 mg BIW / 50 mg QW	12	196	64.3	34.2	10.7	
van de Kerkhof	3	Placebo	12	46	8.7	2.2	2.2	
van de Kerkhof	3	Etanercept 25 mg BIW / 50 mg QW	12	96	68.8	37.5	13.5	
Gottlieb	2	Placebo	12	55	10.9	1.8	0	
Gottlieb	2	Etanercept 25 mg BIW / 50 mg QW	12	57	70.2	29.8	10.5	
EXPRESS	3	Placebo	10	77	7.8	2.6	1.3	

Trial Name	Phase	Treatment Arm	Time Point	N	PASI 50 (%)	PASI 75 (%)	PASI 90 (%)	PASI 100 (%)
EXPRESS	3	Infliximab 5 mg/kg at weeks 0, 2 and 6, then Q8W	10	301	91	80.4	57.1	
EXPRESS II	3	Placebo	10	208		1.9	0.5	
EXPRESS II	3	Infliximab 5 mg/kg at weeks 0, 2 and 6, then Q8W	10	314		75.5	45.2	
SPIRIT	2	Placebo	10	51	21.6	5.9	2	
SPIRIT	2	Infliximab 5 mg/kg at weeks 0, 2 and 6, then Q8W	10	99	97	87.9	57.6	
Chaudhari		Placebo	10	11		18.2		
Chaudhari		Infliximab 5 mg/kg at weeks 0, 2 and 6, then Q8W	10	11		81.8		
Torii	3	Placebo	10	19	10.5	0	0	
Torii	3	Infliximab 5 mg/kg at weeks 0, 2 and 6, then Q8W	10	35	82.9	68.6	54.3	
Yang		Placebo	10	45	13.3	2.2	0	
Yang		Infliximab 5 mg/kg at weeks 0, 2 and 6, then Q8W	10	84	94.1	81	57.1	
UNCOVER 1	3	Placebo	12	431	11.6	3.9	0.5	0

Trial Name	Phase	Treatment Arm	Time Point	N	PASI 50 (%)	PASI 75 (%)	PASI 90 (%)	PASI 100 (%)
UNCOVER 1	3	Ixekizumab 160 mg at week 0, then 80 mg Q2W	12	433	93.8	89.2	70.9	35.3
UNCOVER 2	3	Placebo	12	168	6.6	2.4	0.6	0.6
UNCOVER 2	3	Ixekizumab 160 mg at week 0, then 80 mg Q2W	12	351	94.9	89.7	70.7	40.5
UNCOVER 3	3	Placebo	12	193	15.5	7.3	3.1	0
UNCOVER 3	3	Ixekizumab 160 mg at week 0, then 80 mg Q2W	12	385	93.8	87.3	68.1	37.7
IXORA-S	3	Ixekizumab 160 mg at week 0, then 80 mg Q2W	12	136		88.2	72.8	36
IXORA-S	3	Ustekinumab 45 mg < 100 kg, 90 mg > 100 kg at weeks 0 and 4, then Q12W	12	166		68.7	42.2	14.5
Reich 2017	3	Ixekizumab 160 mg at week 0, then 80 mg Q2W	12	54		90.7	72.2	35.2
Reich 2017	3	Methotrexate (low dose)	12	54		48.1	20.4	5.6
ERASURE	3	Placebo	12	246	8.9	4.5	1.2	0.8
ERASURE	3	Secukinumab 300 mg at weeks 0, 1, 2, and 3, then monthly starting at week 4	12	245	90.6	81.6	59.2	28.6

Trial Name	Phase	Treatment Arm	Time Point	N	PASI 50 (%)	PASI 75 (%)	PASI 90 (%)	PASI 100 (%)
FEATURE	3	Placebo	12	59	5.1	0	0	0
FEATURE	3	Secukinumab 300 mg at weeks 0, 1, 2, and 3, then monthly starting at week 4	12	58	87.9	75.9	60.3	43.1
FIXTURE	3	Placebo	12	324	15.1	4.9	1.5	0
FIXTURE	3	Secukinumab 300 mg at weeks 0, 1, 2, and 3, then monthly starting at week 4	12	323	91.6	77.1	54.2	24.2
JUNCTURE	3	Placebo	12	61	8.2	3.3	0	0
JUNCTURE	3	Secukinumab 300 mg at weeks 0, 1, 2, and 3, then monthly starting at week 4	12	60	96.7	86.7	55	26.7
CLEAR	3	Ustekinumab 45 mg < 100 kg, 90 mg > 100 kg at weeks 0 and 4, then Q12W	12	335		79.1	53.4	25.7
CLEAR	3	Secukinumab 300 mg at weeks 0, 1, 2, and 3, then monthly starting at week 4	12	334		91	72.8	38.9
PRIME	3	Fumaric acid esters	12	95	56.8	21.1	2.1	0
PRIME	3	Secukinumab 300 mg at weeks 0, 1, 2, and 3, then monthly starting at week 4	12	105	97.1	87.6	63.8	28.6
CLARITY	3	Ustekinumab 45 mg < 100 kg, 90 mg > 100 kg at weeks 0 and 4, then Q12W	12	552		74.3	47.8	20.1

Trial Name	Phase	Treatment Arm	Time Point	N	PASI 50 (%)	PASI 75 (%)	PASI 90 (%)	PASI 100 (%)
CLARITY	3	Secukinumab 300 mg at weeks 0, 1, 2, and 3, then monthly starting at week 4	12	550		88	66.5	38.2
ACCEPT	3	Ustekinumab 45 mg at weeks 0 and 4, then Q12W	12	209		67.5	36.4	
ACCEPT	3	Ustekinumab 90 mg at weeks 0 and 4, then Q12W	12	347		73.8	44.7	
LOTUS	3	Placebo	12	162	19.8	11.1	3.1	0.6
LOTUS	3	Ustekinumab 45 mg at weeks 0 and 4, then Q12W	12	160	91.3	82.5	66.9	23.8
PEARL	3	Placebo	12	60	13.3	5	1.7	0
PEARL	3	Ustekinumab 45 mg at weeks 0 and 4, then Q12W	12	61	83.6	67.2	49.2	8.2
PHOENIX 1	3	Placebo	12	255	10.2	3.1	2	0
PHOENIX 1	3	Ustekinumab 45 mg at weeks 0 and 4, then Q12W	12	255	83.5	67.1	41.6	12.6
PHOENIX 1	3	Ustekinumab 90 mg at weeks 0 and 4, then Q12W	12	256	85.9	66.4	36.7	10.9
PHOENIX 2	3	Placebo	12	410	10	3.7	0.7	0

Trial Name	Phase	Treatment Arm	Time Point	N	PASI 50 (%)	PASI 75 (%)	PASI 90 (%)	PASI 100 (%)
PHOENIX 2	3	Ustekinumab 45 mg at weeks 0 and 4, then Q12W	12	409	83.6	66.8	42.3	18.1
PHOENIX 2	3	Ustekinumab 90 mg at weeks 0 and 4, then Q12W	12	411	89.3	75.7	50.9	18.3
Igarashi	2/3	Placebo	12	31	12.9	6.5	3.2	
Igarashi	2/3	Ustekinumab 45 mg at weeks 0 and 4, then Q12W	12	64	82.8	59.4	32.8	
Igarashi	2/3	Ustekinumab 90 mg at weeks 0 and 4, then Q12W	12	62	83.9	67.7	43.6	
VIP-U	4	Placebo	12	21		9.5		
VIP-U	4	Ustekinumab 45 mg < 100 kg, 90 mg > 100 kg at weeks 0 and 4, then Q12W	12	22		77.3		
X-PLORE	2	Placebo	16	42		4.8	2.4	0
X-PLORE	2	Adalimumab 80 mg at week 0, then 40 mg EOW starting at week 1	16	43		69.8	44.2	25.6
VOYAGE-1	3	Placebo	16	174		5.7	2.9	0.6
VOYAGE-1	3	Adalimumab 80 mg at week 0, then 40 mg EOW starting at week 1	16	334		73.1	49.7	17.1

Trial Name	Phase	Treatment Arm	Time Point	N	PASI 50 (%)	PASI 75 (%)	PASI 90 (%)	PASI 100 (%)
VOYAGE-1	3	Guselkumab 100 mg at weeks 0, 4, then Q8W	16	329		91.2	73.3	37.4
VOYAGE-2	3	Placebo	16	248		8.1	2.4	0.8
VOYAGE-2	3	Adalimumab 80 mg at week 0, then 40 mg EOW starting at week 1	16	248		68.5	46.8	20.6
VOYAGE-2	3	Guselkumab 100 mg at weeks 0,4, then Q8W	16	496		86.3	70	34.1
ORION	3	Placebo	16	16			0	0
ORION	3	Guselkumab 100 mg at weeks 0, 4, then Q8W	16	62			75.8	50
Ohtsuki 2018	3	Placebo	16	64	14.1	6.3	0	0
Ohtsuki 2018	3	Guselkumab 100 mg at weeks 0, 4, then Q8W	16	63	95.2	84.1	69.8	27
Nakagawa 2016	2	Placebo	12	38		7.9	2.6	0
Nakagawa 2016	2	Brodalumab 210 mg at weeks 0, 1, and 2, then Q2W	12	37		94.6	91.9	59.5
Papp 2012	2	Placebo	12	38	15.8	0	0	0
Papp 2012	2	Brodalumab 210 mg at weeks 0, 1, and 2, then Q2W	12	40	90	82.5	75	62.5
AMAGINE-1	3	Placebo	12	220		2.7	0.9	0.5
AMAGINE-1	3	Brodalumab 210 mg at weeks 0, 1, and 2, then Q2W	12	222		83.3	70.3	41.9

Trial Name	Phase	Treatment Arm	Time Point	N	PASI 50 (%)	PASI 75 (%)	PASI 90 (%)	PASI 100 (%)
AMAGINE-2	3	Placebo	12	309		8.1	2.9	0.7
AMAGINE-2	3	Ustekinumab 45 mg < 100 kg, 90 mg > 100 kg at weeks 0 and 4, then Q12W	12	300		70	47	21.7
AMAGINE-2	3	Brodalumab 210 mg at weeks 0, 1, and 2, then Q2W	12	612		86.3	70	44.4
AMAGINE-3	3	Placebo	12	315		6	1.9	0.3
AMAGINE-3	3	Ustekinumab 45 mg < 100 kg, 90 mg > 100 kg at weeks 0 and 4, then Q12W	12	313		69.3	47.9	18.5
AMAGINE-3	3	Brodalumab 210 mg at weeks 0, 1, and 2, then Q2W	12	624		85.1	69	36.7
CIMPASI-1	3	Placebo	16	51		6.5	0.4	0.2
CIMPASI-1	3	Certolizumab pegol 400 mg at weeks 0, 2, and 4, then 200 mg Q2W	16	95		66.5	35.8	13.7
CIMPASI-1	3	Certolizumab pegol 400 mg Q2W	16	88		75.8	43.6	12.7
CIMPASI-2	3	Placebo	16	49		11.6	4.5	1.8
CIMPASI-2	3	Certolizumab pegol 400 mg at weeks 0, 2, and 4, then 200 mg Q2W	16	91		81.4	52.6	15.4
CIMPASI-2	3	Certolizumab pegol 400 mg Q2W	16	87		82.6	55.4	18.8

Trial Name	Phase	Treatment Arm	Time Point	N	PASI 50 (%)	PASI 75 (%)	PASI 90 (%)	PASI 100 (%)
CIMPACT	2	Placebo	12	57		5	0.2	
CIMPACT	2	Certolizumab pegol 400 mg at weeks 0, 2, and 4, then 200 mg Q2W	12	165		61.3	31.2	
CIMPACT	2	Certolizumab pegol 400 mg Q2W	12	167		66.7	34	
NCT00245765	2	Placebo	12	59	11.9	6.8	1.7	
NCT00245765	2	Certolizumab pegol 400 mg at week 0, then 200 mg Q2W	12	59	86.4	74.6	39	
NCT00245765	2	Certolizumab pegol 400 mg Q2W	12	58	93.1	82.8	46.6	
reSURFACE-1	3	Placebo	12	154		5.8	2.6	1.3
reSURFACE-1	3	Tildrakizumab 100 mg at weeks 0, 4, then Q12W	12	309		63.8	34.6	13.9
reSURFACE-1	3	Tildrakizumab 200 mg at weeks 0, 4, then Q12W	12	308		62.3	35.4	14
Papp 2015	2	Placebo	16	45		4.4	2.2	
Papp 2015	2	Tildrakizumab 100 mg at weeks 0, 4, then Q12W	16	89		66.3	38.2	
Papp 2015	2	Tildrakizumab 200 mg at weeks 0, 4, then Q12W	16	86		74.4	51.2	

Trial Name	Phase	Treatment Arm	Time Point	N	PASI 50 (%)	PASI 75 (%)	PASI 90 (%)	PASI 100 (%)
reSURFACE-2	3	Placebo	12	156		6	1	0
reSURFACE-2	3	Tildrakizumab 100 mg at weeks 0, 4, then Q12W	12	307		61	39	12.4
reSURFACE-2	3	Tildrakizumab 200 mg at weeks 0, 4, then Q12W	12	314		66	37	11.8
UltIMMa1	3	Placebo	16	102	21.6	8.8	4.9	0
UltIMMa1	3	Ustekinumab 45 mg < 100 kg, 90 mg > 100 kg at weeks 0 and 4, then Q12W	16	100	89	76	42	12
UltIMMa1	3	Risankizumab 150 mg at weeks 0, and 4, then Q12W	16	304	94.1	89.1	75.3	35.9
UltIMMa2	3	Placebo	16	98	16.3	6.1	2	2
UltIMMa2	3	Ustekinumab 45 mg < 100 kg, 90 mg > 100 kg at weeks 0 and 4, then Q12W	16	99	80.8	69.7	47.5	24.2
UltIMMa2	3	Risankizumab 150 mg at weeks 0, and 4, then Q12W	16	294	97.6	90.8	74.8	50.7
IMMvent	3	Adalimumab 80 mg at week 0, then 40 mg EOW starting at week 1	16	304	83.6	71.7	47.4	23

Trial Name	Phase	Treatment Arm	Time Point	N	PASI 50 (%)	PASI 75 (%)	PASI 90 (%)	PASI 100 (%)
IMMvent	3	Risankizumab 150 mg at weeks 0, and 4, then Q12W	16	301	97	90.7	72.4	39.9
IMMhance	3	Placebo	16	100	19	8	2	1
IMMhance	3	Risankizumab 150 mg at weeks 0, and 4, then Q12W	16	407	95.6	88.7	73.2	47.2
BRIDGE	3	Placebo	16	131	29	15.3	4.6	
BRIDGE	3	Fumaric acid esters	16	273	61.9	40.3	22.3	
BRIDGE	3	Dimethyl fumarate	16	267	53.6	37.5	18.4	
Altmeyer 1994		Placebo	16	51		2		
Altmeyer 1994		Fumaric acid esters	16	49		24.5		
PSOR-008 / ESTEEM-1	3	Placebo	16	282	17	5.3	0.4	
PSOR-008 / ESTEEM-1	3	Apremilast 30 mg twice daily after initial titration schedule	16	562	58.7	33.1	9.8	
PSOR-009 / ESTEEM-2	3	Placebo	16	137	19.7	5.8	1.5	
PSOR-009 / ESTEEM-2	3	Apremilast 30 mg twice daily after initial titration schedule	16	274	55.5	28.8	8.8	

Trial Name	Phase	Treatment Arm	Time Point	N	PASI 50 (%)	PASI 75 (%)	PASI 90 (%)	PASI 100 (%)
PSOR-010 / LIBERATE	3b	Placebo	16	84	33.3	11.9	3.6	
PSOR-010 / LIBERATE	3b	Etanercept 25 mg BIW / 50 mg QW	16	83	83.1	48.2	20.5	
PSOR-010 / LIBERATE	3b	Apremilast 30 mg twice daily after initial titration schedule	16	83	62.7	39.8	14.5	
PSOR-005	2b	Placebo	16	88	25	5.7	1.1	
PSOR-005	2b	Apremilast 30 mg twice daily after initial titration schedule	16	88	60.2	40.9	11.4	
Ohtsuki 2017	2b	Placebo	16	84	21.4	7.1	1.2	
Ohtsuki 2017	2b	Apremilast 30 mg twice daily after initial titration schedule	16	85	50.6	28.2	14.1	
Gisondi 2008		Etanercept 25 mg BIW / 50 mg QW	12	22	40.9	22.7		
Gisondi 2008		Acitretin 0.4 mg/kg daily	12	20	20	10		
Meffert 1997		Placebo	10	43	11.6	4.7		
Meffert 1997		Ciclosporin 2.5–3 mg/kg/day	10	44	56.8	29.5		
RESTORE1	3b	Infliximab 5 mg/kg at weeks 0, 2 and 6, then Q8W	16	653	86.8	77.8	54.5	

Trial Name	Phase	Treatment Arm	Time Point	N	PASI 50 (%)	PASI 75 (%)	PASI 90 (%)	PASI 100 (%)
RESTORE1	3b	Methotrexate (high dose)	16	215	60.5	41.9	19.1	
Heydendael 2003		Methotrexate (high dose)	16	43		60.5	39.5	
Heydendael 2003		Ciclosporin 2.5–3 mg/kg/day	16	42		71.4	33.3	
Fallah 2011		Methotrexate (low dose)	12	25	60	24	8	
Fallah 2011		Fumaric acid esters	12	26	42.3	19.2	3.8	
Flytstrom 2007		Methotrexate (low dose)	12	37	64.9	24.3	10.8	
Flytstrom 2007		Ciclosporin 2.5–3 mg/kg/day	12	31	87.1	58.1	29	
Clinical trials included in the long-term meta-analysis								
LIBERATE	3b	Apremilast 30 mg BID	52	74	70.3	52.7	17.6	
Ohtsuki 2017	2b	Apremilast 30 mg BID	52	85		40.0		
PSOR-005/PSOR-005E	2	Apremilast 30 mg BID	52	58	72.4	36.2	13.8	
FIXTURE	3	Etanercept 50 mg BIW until week 12, then QW	52	323		55.5	33.4	10.1
EXPRESS	3	Infliximab 5 mg/kg at week 0, 2, and 6, then Q8W	50	281	68.7	60.5	45.2	

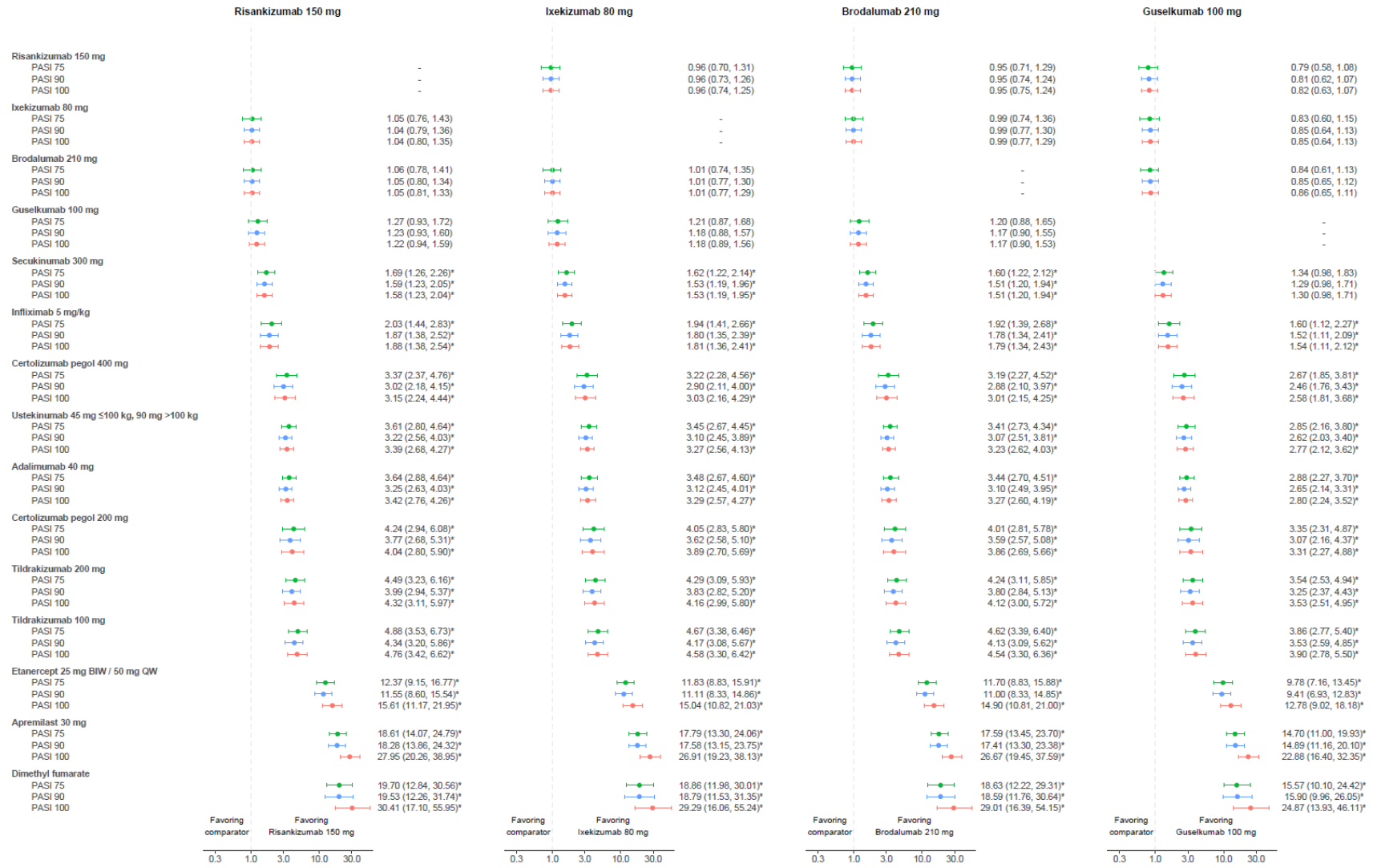
Trial Name	Phase	Treatment Arm	Time Point	N	PASI 50 (%)	PASI 75 (%)	PASI 90 (%)	PASI 100 (%)
EXPRESS II	3	Infliximab 5 mg/kg at week 0, 2, and 6, then Q8W	50	134	72.4	54.5	34.3	
ADACCESS	3	Adalimumab 80 mg at week 0, then 40 mg Q2W	51	115	93.9	79.6	51.0	29.6
Gordon 2006	2	Adalimumab 80 mg at week 0, then 40 mg Q2W	60	45	64.0	56.0	33.0	16.0
VOYAGE 1	3	Adalimumab 80 mg at week 0, then 40 mg Q2W	48	334		62.6	47.9	23.4
AMAGINE-2	3	Ustekinumab 45 mg or 90 mg at week 0, 4, then Q12W	52	300		62.0	48.0	30.0
AMAGINE-3	3	Ustekinumab 45 mg or 90 mg at week 0, 4, then Q12W	52	313		63.0	50.0	29.0
CLEAR	3b	Ustekinumab 45 mg or 90 mg at week 0, 4, then Q12W	52	335		78.2	60.6	36.7
IXORA-S	3	Ustekinumab 45 mg or 90 mg at week 0, 4, then Q12W	52	166		75.9	59.0	35.5
PSTELLAR	3	Ustekinumab 45 mg or 90 mg at week 0, 4, then Q12W	52	69		82.6		

Trial Name	Phase	Treatment Arm	Time Point	N	PASI 50 (%)	PASI 75 (%)	PASI 90 (%)	PASI 100 (%)
UltIMMa1	3	Ustekinumab 45 mg or 90 mg at week 0, 4, then Q12W	52	100	87.0	70.0	44.0	21.0
UltIMMa2	3	Ustekinumab 45 mg or 90 mg at week 0, 4, then Q12W	52	99	85.9	76.8	50.5	30.3
CLEAR	3b	Secukinumab 300 mg at week 0, 1, 2, and 3, then Q4W	52	334		91.6	74.9	44.9
Pooled analysis of four trials (ERASURE, FEATURE, FIXTURE, and JUNCTURE)	3	Secukinumab 300 mg at week 0, 1, 2, and 3, then Q4W	52	686		85.2	68.1	40.8
IXORA-S	3	Ixekizumab 160 mg at week 0, 80 mg Q2W until week 12, then 80 mg Q4W	52	136		88.2	76.5	52.2
UNCOVER 3	3	Ixekizumab 160 mg at week 0, 80 mg Q2W until week 12, then 80 mg Q4W	60	385		83.0	73.0	55.0
AMAGINE-2	3	Brodalumab 210 mg at week 0, 1, 2, then Q2W	52	189		80.0	75.0	56.0
AMAGINE-3	3	Brodalumab 210 mg at week 0, 1, 2, then Q2W	52	194		80.0	73.0	53.0

Trial Name	Phase	Treatment Arm	Time Point	N	PASI 50 (%)	PASI 75 (%)	PASI 90 (%)	PASI 100 (%)
Ohtsuki 2018	3	Guselkumab 100 mg at week 0, 4, then Q8W	52	63	98.4	90.5	77.8	47.6
VOYAGE 1	3	Guselkumab 100 mg at week 0, 4, then Q8W	48	329		87.8	76.3	47.4
IMMvent	3	Risankizumab 150 mg at week 0, 4, then Q12W	44	301	89.0	86.7	75.7	52.8
UltIMMa1	3	Risankizumab 150 mg at week 0, 4, then Q12W	52	304	94.4	91.8	81.9	56.3
UltIMMa2	3	Risankizumab 150 mg at week 0, 4, then Q12W	52	294	93.2	91.5	80.6	59.5

BID, twice daily; BIW, twice a week; EOW, every other week; kg, kilogram; mg, milligram; NMA, network-meta analysis; PASI, Psoriasis Area and Severity Index; Q12W, once every 12 weeks; Q2W, once every 2 weeks; Q4W, once every 4 weeks; Q8W, once every 8 weeks; QW, once weekly

eFigure 1. Estimated odds ratios from the NMA of short-term PASI (base-case)



BIW, twice a week; kg, kilogram; mg, milligram; NMA, network meta-analysis; PASI, Psoriasis Area and Severity Index; PASI 75, 90, 100, a 75%, 90% or 100% decrease from baseline PASI; QW, once weekly

eTable 2. Estimated response rates from the NMA of short-term PASI (sensitivity analyses including global trials only, including phase III trials only, and in an expanded treatment space)

Sensitivity analysis: global trials only						
Treatment	**PASI 75** **Posterior Median, 95% CrI**		**PASI 90** **Posterior Median, 95% CrI**		**PASI 100** **Posterior Median, 95% CrI**	
Risankizumab 150 mg	89.4%	(87.2%, 91.3%)	71.7%	(67.8%, 75.4%)	41.1%	(36.9%, 45.6%)
Ixekizumab 80 mg	88.5%	(86.2%, 90.5%)	70.0%	(66.1%, 73.7%)	39.3%	(35.2%, 43.5%)
Brodalumab 210 mg	88.0%	(85.8%, 90.1%)	69.2%	(65.4%, 73.0%)	38.3%	(34.4%, 42.6%)
Guselkumab 100 mg	87.3%	(84.4%, 90.0%)	68.0%	(63.2%, 72.9%)	37.1%	(32.2%, 42.6%)
Secukinumab 300 mg	82.6%	(79.9%, 85.2%)	60.4%	(56.5%, 64.5%)	29.7%	(26.3%, 33.5%)
Infliximab 5 mg/kg	79.9%	(75.6%, 83.7%)	56.5%	(50.8%, 62.2%)	26.3%	(21.8%, 31.3%)
Certolizumab pegol 400 mg	71.0%	(65.7%, 75.9%)	45.2%	(39.4%, 51.2%)	18.0%	(14.3%, 22.2%)
Ustekinumab 45 mg ≤ 100 kg, 90 mg > 100 kg	69.4%	(66.1%, 72.7%)	43.4%	(39.8%, 47.2%)	16.8%	(14.5%, 19.3%)
Adalimumab 40 mg	70.2%	(66.7%, 73.5%)	44.3%	(40.4%, 48.1%)	17.3%	(14.9%, 20.0%)
Certolizumab pegol 200 mg	66.1%	(59.9%, 71.9%)	39.8%	(33.6%, 46.3%)	14.6%	(11.1%, 18.7%)
Tildrakizumab 100 mg	63.0%	(57.8%, 68.1%)	36.6%	(31.7%, 41.9%)	12.7%	(10.1%, 15.8%)
Tildrakizumab 200 mg	64.9%	(59.8%, 70.0%)	38.6%	(33.5%, 44.0%)	13.8%	(11.1%, 17.2%)
Etanercept 25 mg BIW / 50 mg QW	39.8%	(35.3%, 44.6%)	17.6%	(14.7%, 20.9%)	4.2%	(3.2%, 5.4%)
Apremilast 30 mg	31.8%	(27.7%, 36.2%)	12.6%	(10.2%, 15.3%)	2.6%	(1.9%, 3.4%)
Dimethyl fumarate	30.9%	(23.4%, 39.7%)	12.1%	(8.1%, 17.5%)	2.5%	(1.4%, 4.2%)

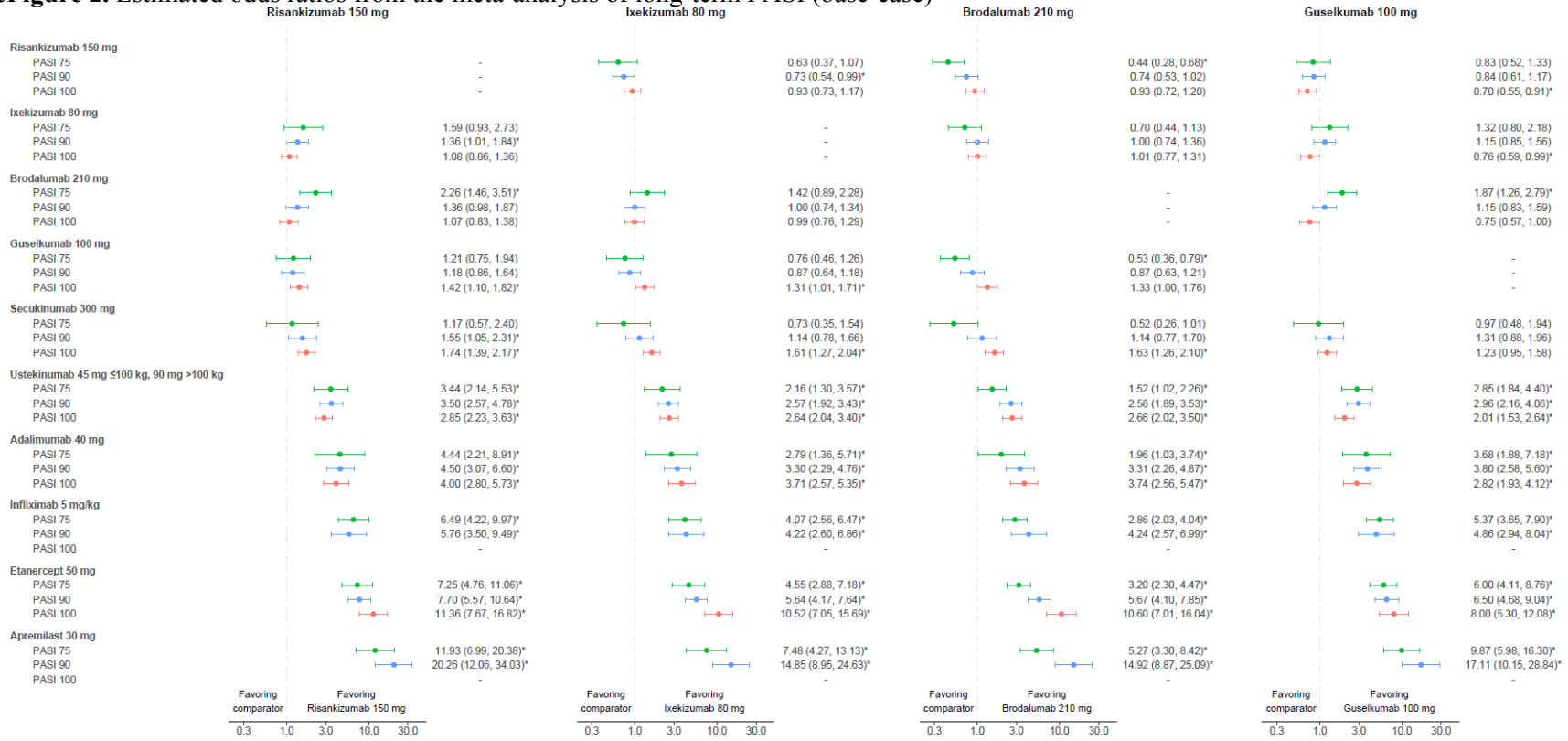
Placebo	5.1%	(4.6%, 5.7%)	1.1%	(0.9%, 1.2%)	0.1%	(0.1%, 0.1%)
Sensitivity analysis: phase III trials only						
Treatment	**PASI 75** **Posterior Median, 95% CrI**		**PASI 90** **Posterior Median, 95% CrI**		**PASI 100** **Posterior Median, 95% CrI**	
Risankizumab 150 mg	89.2%	(86.9%, 91.2%)	71.6%	(67.5%, 75.4%)	40.3%	(35.8%, 44.8%)
Ixekizumab 80 mg	88.7%	(86.4%, 90.7%)	70.6%	(66.7%, 74.4%)	39.2%	(35.0%, 43.5%)
Brodalumab 210 mg	87.6%	(85.1%, 89.8%)	68.7%	(64.6%, 72.7%)	37.1%	(32.9%, 41.5%)
Guselkumab 100 mg	86.8%	(83.9%, 89.5%)	67.4%	(62.6%, 72.0%)	35.7%	(31.0%, 40.8%)
Secukinumab 300 mg	82.8%	(80.0%, 85.4%)	61.0%	(56.9%, 65.1%)	29.5%	(26.0%, 33.3%)
Infliximab 5 mg/kg	80.0%	(75.5%, 84.2%)	57.0%	(51.0%, 63.2%)	26.0%	(21.3%, 31.6%)
Certolizumab pegol 400 mg	69.3%	(62.7%, 75.3%)	43.6%	(36.6%, 50.6%)	16.4%	(12.3%, 21.2%)
Ustekinumab 45 mg ≤ 100 kg, 90 mg > 100 kg	69.1%	(65.6%, 72.4%)	43.3%	(39.6%, 47.2%)	16.2%	(13.9%, 18.8%)
Adalimumab 40 mg	69.9%	(66.3%, 73.3%)	44.2%	(40.3%, 48.3%)	16.8%	(14.3%, 19.5%)
Certolizumab pegol 200 mg	65.3%	(58.5%, 71.6%)	39.2%	(32.6%, 46.2%)	13.8%	(10.2%, 18.0%)
Tildrakizumab 100 mg	62.1%	(56.0%, 68.0%)	36.0%	(30.3%, 42.1%)	12.0%	(9.1%, 15.5%)
Tildrakizumab 200 mg	62.5%	(56.3%, 68.3%)	36.4%	(30.6%, 42.5%)	12.2%	(9.3%, 15.7%)
Etanercept 25 mg BIW / 50 mg QW	40.0%	(35.0%, 45.2%)	17.9%	(14.7%, 21.6%)	4.1%	(3.1%, 5.5%)
Apremilast 30 mg	31.0%	(26.5%, 35.9%)	12.3%	(9.8%, 15.2%)	2.4%	(1.7%, 3.3%)
Dimethyl fumarate	29.8%	(22.1%, 38.6%)	11.6%	(7.6%, 17.0%)	2.2%	(1.2%, 3.8%)

Placebo	5.2%	(4.7%, 5.8%)	1.1%	(0.9%, 1.3%)	0.1%	(0.1%, 0.1%)
Sensitivity analysis: expanded treatment space						
Treatment	**PASI 75** **Posterior Median, 95% CrI**		**PASI 90** **Posterior Median, 95% CrI**		**PASI 100** **Posterior Median, 95% CrI**	
Risankizumab 150 mg	89.2%	(86.9%, 91.3%)	71.6%	(67.5%, 75.5%)	40.4%	(35.8%, 45.0%)
Ixekizumab 80 mg	88.4%	(86.0%, 90.5%)	70.1%	(66.0%, 73.9%)	38.7%	(34.3%, 43.0%)
Brodalumab 210 mg	88.7%	(86.4%, 90.9%)	70.7%	(66.8%, 74.8%)	39.4%	(35.2%, 44.1%)
Guselkumab 100 mg	86.8%	(83.7%, 89.4%)	67.3%	(62.5%, 72.0%)	35.7%	(30.9%, 40.8%)
Secukinumab 300 mg	83.5%	(80.8%, 86.1%)	62.1%	(58.0%, 66.2%)	30.6%	(27.0%, 34.6%)
Infliximab 5 mg/kg	80.3%	(76.4%, 83.9%)	57.4%	(52.1%, 62.7%)	26.5%	(22.2%, 31.2%)
Certolizumab pegol 400 mg	71.1%	(65.2%, 76.6%)	45.6%	(39.2%, 52.3%)	17.7%	(13.8%, 22.4%)
Ustekinumab 45 mg ≤ 100 kg, 90 mg > 100 kg	69.8%	(66.4%, 73.3%)	44.1%	(40.3%, 48.2%)	16.8%	(14.4%, 19.5%)
Adalimumab 40 mg	69.6%	(66.2%, 72.8%)	43.9%	(40.2%, 47.6%)	16.6%	(14.3%, 19.1%)
Certolizumab pegol 200 mg	66.2%	(59.4%, 72.6%)	40.2%	(33.4%, 47.4%)	14.4%	(10.6%, 18.9%)
Tildrakizumab 100 mg	63.0%	(57.2%, 68.6%)	36.9%	(31.4%, 42.7%)	12.5%	(9.7%, 15.9%)
Tildrakizumab 200 mg	65.0%	(59.3%, 70.5%)	38.9%	(33.3%, 45.0%)	13.6%	(10.6%, 17.3%)
Etanercept 25 mg BIW / 50 mg QW	40.2%	(35.5%, 45.3%)	18.0%	(14.9%, 21.7%)	4.2%	(3.2%, 5.5%)
Ciclosporin 2.5–3 mg/kg	43.7%	(32.6%, 55.4%)	20.4%	(13.2%, 29.8%)	5.0%	(2.7%, 8.9%)
Methotrexate (high dose)	44.4%	(34.5%, 54.4%)	20.9%	(14.3%, 28.9%)	5.2%	(3.0%, 8.5%)

Methotrexate (low dose)	31.2%	(24.3%, 39.1%)	12.4%	(8.6%, 17.2%)	2.4%	(1.5%, 3.9%)
Apremilast 30 mg	30.9%	(26.8%, 35.1%)	12.2%	(9.9%, 14.7%)	2.4%	(1.8%, 3.1%)
Fumaric acid esters	31.2%	(25.1%, 37.6%)	12.3%	(9.0%, 16.3%)	2.4%	(1.6%, 3.6%)
Dimethyl fumarate	28.0%	(20.7%, 36.2%)	10.6%	(6.9%, 15.4%)	2.0%	(1.1%, 3.3%)
Acitretin 0.4 mg/kg	19.5%	(4.6%, 47.7%)	6.3%	(0.9%, 23.5%)	1.0%	(0.1%, 6.2%)
Placebo	5.4%	(4.8%, 5.9%)	1.1%	(1.0%, 1.3%)	0.1%	(0.1%, 0.1%)

BIW, twice a week; CI, confidence interval; CrI, credible interval; kg, kilogram; mg, milligram; NMA, network meta-analysis; PASI, Psoriasis Area and Severity Index; PASI 75, 90, 100, a 75%, 90% or 100% decrease from baseline PASI; QW, once weekly

eFigure 2. Estimated odds ratios from the meta-analysis of long-term PASI (base-case)



BIW, twice a week; kg, kilogram; mg, milligram; PASI, psoriasis area and severity index; PASI 75, 90, 100: a 75%, 90% or 100% decrease from baseline PASI

eTable 3. Estimated response rates from the meta-analysis of long-term PASI (sensitivity analyses: including global trials only, including trials reporting NRI data, and including phase III trials only)

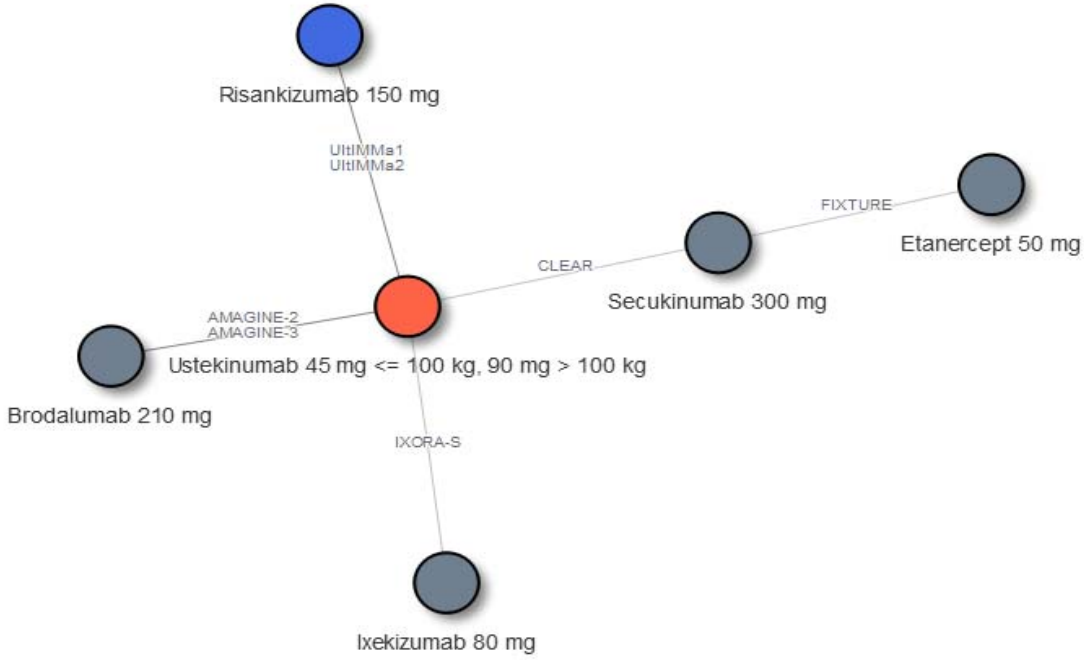
Sensitivity analysis: global trials only						
Treatment	**PASI 75 Response Rate, 95% CI**		**PASI 90 Response Rate, 95% CI**		**PASI 100 Response Rate, 95% CI**	
Risankizumab 150 mg	90.1%	(86.3%, 92.9%)	79.4%	(75.5%, 82.9%)	56.2%	(52.4%, 59.9%)
Guselkumab 100 mg	87.8%	(83.8%, 91.0%)	76.3%	(71.4%, 80.6%)	47.4%	(42.1%, 52.8%)
Brodalumab 210 mg	80.0%	(75.7%, 83.7%)	74.0%	(69.3%, 78.1%)	54.5%	(49.5%, 59.4%)
Ixekizumab 80 mg	85.0%	(79.2%, 89.4%)	73.9%	(69.9%, 77.5%)	54.3%	(50.0%, 58.5%)
Secukinumab 300 mg	88.6%	(80.6%, 93.6%)	71.3%	(64.2%, 77.5%)	42.4%	(38.5%, 46.4%)
Ustekinumab 45 mg≤100 kg, 90 mg>100 kg	72.5%	(65.9%, 78.2%)	52.4%	(47.1%, 57.7%)	31.0%	(27.2%, 35.2%)
Adalimumab 40 mg	67.1%	(52.9%, 78.7%)	46.2%	(38.6%, 53.9%)	24.2%	(18.8%, 30.7%)
Infliximab 5 mg/kg	58.3%	(52.5%, 63.8%)	40.1%	(30.0%, 51.1%)	-	-
Etanercept 50 mg	55.5%	(50.1%, 60.9%)	33.4%	(28.5%, 38.7%)	10.1%	(7.3%, 13.9%)
Apremilast 30 mg	44.7%	(29.4%, 61.0%)	16.0%	(10.7%, 23.3%)	-	-
Sensitivity analysis: trials reporting NRI data						
Treatment	**PASI 75 Response Rate, 95% CI**		**PASI 90 Response Rate, 95% CI**		**PASI 100 Response Rate, 95% CI**	
Risankizumab 150 mg	90.1%	(86.3%, 92.9%)	79.4%	(75.5%, 82.9%)	56.2%	(52.4%, 59.9%)

Guselkumab 100 mg	87.8%	(83.8%, 91.0%)	76.3%	(71.4%, 80.6%)	47.4%	(42.1%, 52.8%)
Secukinumab 300 mg	91.6%	(88.1%, 94.1%)	74.9%	(69.9%, 79.2%)	44.9%	(39.7%, 50.3%)
Brodalumab 210 mg	80.0%	(75.7%, 83.7%)	74.0%	(69.3%, 78.1%)	54.5%	(49.5%, 59.4%)
Ixekizumab 80 mg	85.0%	(79.2%, 89.4%)	73.9%	(69.9%, 77.5%)	54.3%	(50.0%, 58.5%)
Ustekinumab 45 mg ≤ 100 kg, 90 mg > 100 kg	71.1%	(64.2%, 77.0%)	52.4%	(47.1%, 57.7%)	31.0%	(27.2%, 35.2%)
Adalimumab 40 mg	61.8%	(56.8%, 66.5%)	41.9%	(28.5%, 56.7%)	22.0%	(16.7%, 28.4%)
Infliximab 5 mg/kg	58.3%	(52.5%, 63.8%)	40.1%	(30.0%, 51.1%)	-	-
Etanercept 50 mg	55.5%	(50.1%, 60.9%)	33.4%	(28.5%, 38.7%)	10.1%	(7.3%, 13.9%)
Apremilast 30 mg	40.0%	(30.2%, 50.7%)	-	-	-	-
Sensitivity analysis: phase III trials only						
Treatment	**PASI 75 Response Rate, 95% CI**		**PASI 90 Response Rate, 95% CI**		**PASI 100 Response Rate, 95% CI**	
Risankizumab 150 mg	90.1%	(86.3%, 92.9%)	79.4%	(75.5%, 82.9%)	56.2%	(52.4%, 59.9%)
Guselkumab 100 mg	88.2%	(84.6%, 91.1%)	76.5%	(72.1%, 80.5%)	47.4%	(42.5%, 52.4%)
Brodalumab 210 mg	80.0%	(75.7%, 83.7%)	74.0%	(69.3%, 78.1%)	54.5%	(49.5%, 59.4%)
Ixekizumab 80 mg	85.0%	(79.2%, 89.4%)	73.9%	(69.9%, 77.5%)	54.3%	(50.0%, 58.5%)
Secukinumab 300 mg	88.6%	(80.6%, 93.6%)	71.3%	(64.2%, 77.5%)	42.4%	(38.5%, 46.4%)
Ustekinumab 45 mg ≤ 100 kg, 90 mg > 100 kg	72.5%	(65.9%, 78.2%)	52.4%	(47.1%, 57.7%)	31.0%	(27.2%, 35.2%)
Adalimumab 40 mg	71.4%	(52.1%, 85.1%)	48.7%	(44.1%, 53.3%)	25.6%	(20.2%, 31.9%)

Infliximab 5 mg/kg	58.3%	(52.5%, 63.8%)	40.1%	(30.0%, 51.1%)	-	-
Etanercept 50 mg	55.5%	(50.1%, 60.9%)	33.4%	(28.5%, 38.7%)	10.1%	(7.3%, 13.9%)
Apremilast 30 mg	52.7%	(41.4%, 63.8%)	17.6%	(10.5%, 27.9%)	-	-

BIW, twice a week; CI: confidence interval; CrI, credible interval; kg, kilogram; mg, milligram; NRI, non-response imputation; PASI, Psoriasis Area and Severity Index; PASI 75, 90, 100, a 75%, 90% or 100% decrease from baseline PASI

eFigure 3. Evidence network for NMA of long-term PASI



kg, kilogram; mg, milligram; NMA, network meta-analysis; PASI, Psoriasis Area and Severity Index

eTable 4. Estimated response rates from the NMA of long-term PASI

Treatment	PASI 75		PASI 90		PASI 100	
	Posterior Median, 95% CrI		Posterior Median, 95% CrI		Posterior Median, 95% CrI	
Risankizumab 150 mg	91.1%	(87.6%, 93.8%)	81.3%	(75.7%, 86.1%)	59.7%	(52.1%, 67.1%)
Brodalumab 210 mg	88.2%	(84.7%, 91.1%)	76.6%	(71.3%, 81.4%)	53.3%	(46.7%, 59.9%)
Ixekizumab 80 mg	83.5%	(76.2%, 89.2%)	69.8%	(60.1%, 78.3%)	45.0%	(34.8%, 55.6%)
Secukinumab 300 mg	80.1%	(74.7%, 84.8%)	65.2%	(58.1%, 71.6%)	39.9%	(32.9%, 47.3%)
Ustekinumab 45 mg≤100 kg, 90 mg>100 kg	69.8%	(67.3%, 72.3%)	52.5%	(49.3%, 55.7%)	28.0%	(25.2%, 31.0%)
Etanercept 50 mg BIW	53.8%	(44.1%, 63.5%)	35.9%	(27.1%, 45.6%)	15.7%	(10.4%, 22.6%)

CrI, credible interval; kg, kilogram; mg, milligram; NMA, network meta-analysis; PASI, Psoriasis Area and Severity Index; PASI 75, 90, 100, a 75%, 90% or 100% decrease from baseline PASI

eTable 5. Estimated Odds Ratios for PASI 90 from the NMA of long-term PASI

Etanercept 50 mg	1.97 (1.35, 2.91)*	3.34 (2.53, 4.42)*	4.13 (2.35, 7.34)*	5.86 (3.72, 9.36)*	7.80 (4.75, 12.94)*
0.51 (0.34, 0.74)*	**Ustekinumab 45 mg ≤100 kg, 90 mg >100 kg**	1.69 (1.29, 2.22)*	2.09 (1.39, 3.21)*	2.97 (2.32, 3.83)*	3.95 (2.90, 5.45)*
0.30 (0.23, 0.39)*	0.59 (0.45, 0.78)*	**Secukinumab 300 mg**	1.24 (0.75, 2.05)	1.76 (1.22, 2.54)*	2.33 (1.54, 3.56)*
0.24 (0.14, 0.42)*	0.48 (0.31, 0.72)*	0.81 (0.49, 1.32)	**Ixekizumab 160 mg**	1.42 (0.87, 2.30)	1.89 (1.12, 3.19)*
0.17 (0.11, 0.27)*	0.34 (0.26, 0.43)*	0.57 (0.39, 0.82)*	0.70 (0.44, 1.15)	**Brodalumab 210 mg**	1.33 (0.89, 1.99)
0.13 (0.08, 0.21)*	0.25 (0.18, 0.34)*	0.43 (0.28, 0.65)*	0.53 (0.31, 0.90)*	0.75 (0.50, 1.12)	**Risankizumab 150 mg**